

## REMARKS

Claims 1-23 are pending and under consideration in the present Application. Claims 1, 16, 19 and 23 have been amended. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks. The objections and rejections are respectfully traversed below.

### Claim Objections

In item 1, on page 2, lines 8-10 of the Office Action mailed June 7, 2007 (hereafter "Office Action"), claims 1, 19 and 23 were objected to because of lack of antecedent basis in the claims for the recitation "the design" (Office Action, page 2, line 9). Claims 1, 19 and 23 are herein amended to delete the definite article "the" in the recitations "the design". Based on this amendment, claims 1, 19 and 23 are definite. It is respectfully requested that the objection to claims 1, 19 and 23 be withdrawn in the next Office Action.

In item 1, on page 2, lines 11-12 of the Office Action, claims 1, 8, 11, 18, 19, 22 and 23 were objected to because "the acronym 'VLAN' is not defined " (Office Action, page 2, lines 11-12). Claims 1, 19 and 23 are herein amended to recite "wherein a VLAN is a virtual local area network". The acronym "LANs" is defined in the original specification as meaning "local area networks" (specification, paragraph [0002]). The acronym "VLAN" is defined in the original specification as meaning "virtual LAN", i.e., meaning a virtual local area network, (specification, paragraphs [0002] and [0003]). Therefore, no new matter has been added herein by amending the claims to recite "virtual local area network". Claim 8, 11, 18 and 22-23 depend from independent claims 1 and 19, respectively; therefore, the instances of the acronym VLANS recited in claims 8, 11, 18 and 22-23 are defined for the same reasons discussed in regard to claims 1 and 19. It is respectfully requested that the objection to claims 1, 19 and 23 be withdrawn in the next Office Action.

In item 1, from page 2, line 13 to line 4 of page 3 of the Office Action, claims 6-7 were "objected to under 37 CFR 1.75 as being substantial duplicates of claims 4-5" (Office Action,

page 2, lines 13-14) and based on "a slight difference in wording" (Office Action page 2, line 15) and "according to claim 1 a class of service is always present" (Office Action, page 3, line 2) and because "nowhere does claim 6 indicate that there is a bandwidth requirement associated with a class of service, only with the access ports" (Office Action, page 3, lines 3-4). This is not the case.

MPEP 706.03(k) provides guidance by distinguishing duplicate claims as having slight differences in wording from non-duplicate claims with different recitations. Claim 6 has a different wording and meaning with the recitation of "in said class of service" than claim 4 which is silent in regard to a recitation of the "class of service". Thus, with the recitation in claim 6 of "in said class of service", claim 6 further defines and describes a different species of determining in the determination of the "least cost path", including "in said class of service", which is different from the recitation in claim 4 that does not include the "class of service". Furthermore, claim 7 depends from base claim 6 and thus, claim 7 takes on the recitations of claim 6, thus rendering claim 7 distinct from and non-duplicative of claim 5.

In regard to "according to claim 1 a class of service is always present" (Office Action, page 3, line 2), the alleged always present class of service is one of three components received in the process of "facilitating the design and assignment of Ethernet VLANs" (specification, paragraph [0022], lines 1-2); furthermore, the "class of service" component is a "requested" component (see the original specification, paragraphs [0029] and [0034] associated with calculating HUB VALUES (see, the original specification paragraph [0024], lines 8-9 and FIG. 2, element 214; here in element 214, it is indicated in the specification and FIG. 2 as optional as to whether the HUB VALUE is calculated; therefore, the class of service component may not be requested.

In regard to the allegation in the Office Action that "nowhere does claim 6 indicate that there is a bandwidth requirement associated with a class of service, only with the access ports" (Office Action, page 3, lines 3-4), the Applicant wishes to respectfully advise that claim 6 precisely does indicate that there is a bandwidth requirement associated with a class of service, with the access ports by reciting "determining if each said least cost path in said list has capacity for said bandwidth requirement corresponding to said another of said access ports in said class of

service" (claim 6, lines 3-4). For all of the above reasons, it is respectfully requested that the objections of claims 6 and 7 be withdrawn in the next Office Action.

In item 1, on page 3, lines 5 to 13 of the Office Action, claims 12-13 were "objected to under 37 CFR 1.75 as being substantial duplicates of claims 9-10" (Office Action, page 3, lines 5-6). The same arguments apply to claims 12 and 13 as those arguments applied above to claims 6 and 7; thus, for all of the reasons discussed above in regard to claims 6 and 7, claims 12 and 13 are not duplicates of claims 9 and 10 and it is respectfully requested that the objections of claims 12 and 13 be withdrawn in the next Office Action.

In item 1 on page 3 of the Office Action, claim 16 was objected to because of lack of proper antecedent basis. Claim 16 is herein amended to recite "said two or more. . . ." as suggested by the Examiner. Therefore, it is respectfully requested that the objection to claim 16 be withdrawn in the next Office Action.

#### Claim Rejections Under 35 U.S.C. § 101

In item 2 from the last two lines on page 3 to line 7 on page 4 of the Office Action, claim 23 was "rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter" (Office Action, page 4, lines 4-5). Claim 23 is herein amended to recite, in part, "computer-executable instructions when executed by a computer processor cause the computer processor to perform the method" (claim 23, lines 3-4); therefore, claim 23 is now statutory as amended. It is respectfully requested that the rejection of claim 3 under 35 USC § 101 be withdrawn in the next Office Action.

#### Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-18 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite, because:

The majority of the subject matter of claim 1 is directed to creating a VLAN 'if said searching does; not result in locating said VLAN'. The claim becomes indefinite if said searching *does* result in locating said VLAN because the aspects of facilitating the design and assignment

of Ethernet VLANs will not be realized. If the searching does result in locating the VLAN, only the steps of 'receiving [...]; determining [...]; searching [...]' would be performed. These steps do not amount to facilitating the design of Ethernet VLANs

(Office Action, page 4, lines 15-21).

Claim 1 is herein amended to recite:

adding said new access port to an existing VLAN, if said searching results in locating the existing VLAN, by: determining a list of shortest paths with capacity for said new access port; performing one of determining a lowest hub value, if there is more than one path in the list of shortest paths; and adding said new access port to the existing VLAN, if there is at least one path

(claim 1, lines 18-24). As amended and according to exemplary embodiments, if the method of searching does result in locating an existing VLAN, then the method performs additional operations associated with adding said new access port to the existing VLAN, where the additional operations include "determining a list of shortest paths with capacity for said new access port . . . [and] performing one of determining a lowest hub value, if there is more than one path in the list of shortest paths" (claim 1, lines 20-22). Therefore, claim 1 is definite as amended; furthermore, examples of the additional operations are illustrated in FIG. 2 and discussed in the original specification in paragraph [0023]:

a loop is performed to add each new access port received at step 202 to the existing VLAN. At step 210, a list of the possible physical paths from the new access port to a switch in the VLAN is created. . . . Next, at step 212, it is determined if there is more than one physical path from the new access port to a switch contained in the VLAN. If there is more than one physical path, then step 214 is performed to calculate the total hub value associated with each of these physical paths. At step 216, the path resulting in the lowest total hub value is selected. The new access port is connected to the VLAN via the selected path at step 218

(specification, paragraph [0023]). Dependent claims 2-18 depend from claim 1 and are definite for the reasons discussed in regard to claim 1.

Independent claims 19 and 23 include recitations in a manner similar to claim 1 of "adding said new access port to an existing VLAN, if said searching results in locating the existing VLAN" (claims 19 and 23, lines 25-31 and 22-28 respectively). Dependent claims 20-22 depend from claim 19; therefore, claims 19-23 are definite for the reasons discussed in regard to claim 1.

In item 3 on page 5 of the Office Action, claims 19-23 were rejected 35 USC § 112, second paragraph as indefinite because "claim 19 recites a system and a method of using that system" (Office Action, page 5, lines 7-8).

It is well settled that a functional recitation in a claim "is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. In *re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971)" (MPEP 2173.05(g)). Functional method recitations contained in a system claim define and modify the system elements of the claim; thus, a functional recitation "is often used in association with . . . a process to define a particular capability or purpose that is served by the recited element" (MPEP 2173.05(g)).

Claim 19 as amended recites "a host system in communication with said network, wherein said host system contains a computer readable storage medium including computer-executable instructions for facilitating design and assignment of Ethernet VLANs, wherein the computer-executable instructions when executed by a computer processor cause the computer processor to perform a method comprising" (claim 19, lines 7-10), the method recitations that follow are merely functional recitations that define and modify the host system. For at least these reasons, claim 19 is not ambiguous and not indefinite. Dependent claims 20-22 depend on claim 19 and are definite for the same reasons discussed in regard to claim 19.

In item 3 on page 5, claim 23 was rejected under 35 U.S.C. § 112, second paragraph because "the ordering of . . . [the] language makes the claim indefinite" (Office Action, page 5, line 11). Claim 23 is herein amended to recite a "computer-readable medium having computer-executable instructions for facilitating design and assignment of Ethernet VLANs, wherein the

computer-executable instructions when executed by a computer processor cause the computer processor to perform a method comprising" (claim 23, lines 1-4). It is respectfully submitted that the ordering of the language of the preamble of claim 23 as amended does not make the claim indefinite.

For all of the above reasons, it is respectfully requested that the rejection under 35 USC § 112, second paragraph of claims 1-23 be withdrawn in the next Office Action.

#### Claim Rejections Under 35 USC § 103(a)

In item 2 on page 6 of the Office Action, claim 1 was rejected under 35 USC § 103(a) as unpatentable over US Patent 5,684,800 to Dobbins (hereafter "Dobbins (800)") in view of IEEE Standard 802.1q (hereafter "IEEE 802").

Claim 1 recites "receiving a VLAN name, **a class of service** and two or more access ports" (claim 1, line 3, emphasis added).

It is well settled in the rules that in "rejecting claims for want of novelty or for obviousness, the [E]xaminer must cite the best references. . . [and] **the particular part relied on must be designated.** . . ." (37CFR §1.104(c)(2) emphasis added).

It is also well settled in the guidance from the MPEP that rejections must be properly expressed in Office Actions and an "omnibus rejection of the claim 'on the references' . . . is . . . not informative" (MPEP 707.07(d) IMPROPERLY EXPRESSED REJECTIONS).

In item 2 on page 7 of the Office Action, it was admitted that Dobbins (800) does not disclose 'receiving . . . a class of service'" (Office Action, page 7, line 7). Then in item 2 on page 7 of the Office Action, it was alleged that "'receiving . . . a class of service' . . . [is disclosed] by the IEEE standard 802.1q as a quality of service or priority indicator" (Office Action, page 7, lines 7-8). However, the IEEE standard 802.1q is silent as to "receiving . . . a class of service" as recited in claim 1 and the Office Action failed to meet the burden of showing where in the IEEE standard 802.1q **the particular part relied. . . .**" on can be found, according to (37CFR §1.104(c)(2) emphasis added). Furthermore, the rejection of claim 1 is an improperly expressed

omnibus rejection which is not informative (MPEP 707.07(d)). Therefore, Dobbins (800) and IEEE 802 either combined together or taken individually do not teach or suggest "receiving . . . a class of service" as recited in claim 1. For these reasons above, claim 1 is allowable.

Independent claims 19 and 23 recite "receiving . . . **a class of service**" each in a manner similar to claim 1. Claims 2-18 and 20-22 depend from claims 1 and 19 respectively; therefore, claims 2-23 distinguish over the applied art and are allowable for the reasons discussed in regard to claim 1.

In addition, in item 3 on page 9 of the Office Action, claims 2-3 were rejected under 35 USC § 103(a) as unpatentable over Dobbins (800) in view of IEEE 802 further in view of US 6,104,701 to Avargues (hereafter "Avargues"). It was admitted in the Office Action that "Dobbins (800) and IEEE 802.1q do not disclose 'selecting a pre-selected number of said two or more access ports'" (Office Action, page 9, lines 14-15). Avargues is non-analogous art and fails to teach or suggest the recitations admittedly missing from Dobbins (800) and IEEE 802, because Avargues is directed to "a query for . . . [a] called number to . . . private network nodes" (Avargues, column 4, lines 8-9). Dobbins (800), IEEE 802 and Avargues either combined together or taken individually do not teach or suggest each recitation in claims 2 and 3. Not only does Avargues not teach or suggest the recitations admittedly missing from Dobbins (800) and IEEE 802, but Avargues also fails to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. For these additional reasons claims 2 and 3 are allowable.

In addition, in item 4 on page 10 of the Office Action, claims 4-7 were rejected under 35 USC § 103(a) as unpatentable over Dobbins (800), IEEE 802, Avargues and further in view of US Patent Application 2003/0067928 to Gonda (hereafter "Gonda"). It was admitted in the Office Action that neither "Dobbins (800), IEEE 802.1q nor Avargues disclose 'wherein each said two or more access ports includes a corresponding bandwidth requirement and said mapping a base path further includes: determining if each said least cost path in said list has capacity for said bandwidth requirement corresponding to said another of said access ports'" (Office Action, page 10, line 18 to page 11, line 3). Gonda fails to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. Therefore, Dobbins (800), IEEE 802, Avargues and Gonda

either combined together or taken individually do not teach or suggest each recitation in claims 4-7. Thus, for these additional reasons claims 4-7 are allowable.

In addition, in item 5 on page 12 of the Office Action, claims 8 and 11 were rejected under 35 USC § 103(a) as unpatentable over Dobbins (800) in view of US 5,825,772 (hereafter "Dobbins (772)"). It was admitted in the Office Action that "Dobbins (800) does not disclose 'creating a list of one or more least cost paths from said access port to one of said switches located in said VLAN'" (Office Action, page 12, lines 3-4). Furthermore, Dobbins (772) fails to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. Therefore, Dobbins (800) and Dobbins (772) either combined together or taken individually do not teach or suggest each recitation in claims 8 and 11. Thus, for these additional reasons claims 8 and 11 are allowable.

In addition, in item 6 on page 13 of the Office Action, claims 9-10 and 12-13 were rejected under 35 USC § 103(a) as unpatentable over Dobbins (800) in view of Dobbins (772) and further in view of Ganda. It was admitted in the Office Action that "Dobbins (800) and Dobbins (772) do not disclose 'wherein each said two or more access ports includes a corresponding bandwidth requirement and said mapping a new path further includes: determining if each said least cost path in said list has capacity for said bandwidth requirement corresponding to said access port'" (Office Action, page 13, lines 3-6). Furthermore, Dobbins (772) and Ganda fail to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. Therefore, Dobbins (800), Dobbins (772) and Ganda either combined together or taken individually do not teach or suggest each recitation in claims 9-10 and 12-13. Thus, for these additional reasons claims 9-10 and 12-13 are allowable.

In addition, in item 7 on page 14 of the Office Action, claims 14 and 15 were rejected under 35 USC § 103(a) as unpatentable over Dobbins (800) in view of Avargues. It was admitted in the Office Action that "Dobbins (800) does not disclose 'using least cost paths'" (Office Action, page 14, line 6). Furthermore, Avargues fails to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. Therefore, Dobbins (800) and Avargues either combined together or taken individually do not teach or suggest each recitation in claims 14 and 15.



Furthermore, it was alleged in the Office Action that "[l]east cost paths are well known in the art" (Office Action, page 14, lines 8-9). The Applicant respectfully traverses the "well known in the art" statement and respectfully demands the Examiner produce authority for the statement. The alleged "well known" recitation is not considered to be common knowledge in the art. In this case, the recitation is not of notorious character or capable of instant and unquestionable demonstration as being "well-known". See MPEP § 2144.03(A) ("the notice of facts beyond the record which may be taken by the Examiner must be capable of such instant and unquestionable demonstration as to defy dispute"). Instead, this recitation is unique to the present invention. According to MPEP § 2144.03(B) "there must be some form of evidence in the record to support an assertion of common knowledge"). It appears that the Examiner also bases the rejection, at least in part, on personal knowledge. The Examiner is required under 37 CFR § 1.104(d)(2) to support such an assertion with an affidavit when called for by the Applicant. Thus, Applicant calls upon the Examiner to support the "well known" assertion with an affidavit or some other documentation authority. For these additional reasons, claims 14 and 15 are allowable.

In addition, in item 8 on page 14 of the Office Action, claim 18 was rejected under 35 USC § 103(a) as unpatentable over Dobbins (800) in view of US Patent Application 2004/0042454 to Zabihi et al. (hereafter "Zabihi"). It was admitted in the Office Action that "Dobbins (800) does not disclose a database containing 'VLAN trunk fields'" (Office Action, page 15, line 1). Zabihi fails to correct the deficiencies in IEEE 802 mentioned above in the discussion of claim 1. Therefore, Dobbins (800) and Zabihi either combined together or taken individually do not teach or suggest each recitation in claims 8 and 11. Thus, for these additional reasons claim 18 is allowable.

Thus, for these additional reasons claims 2-15 and 18 are allowable. It is respectfully requested that the rejections of claims 1-23 be withdrawn in the next Office Action.

### CONCLUSION

It is submitted that the references cited by the Examiner either combined together or taken individually do not teach or suggest the features of the present claimed invention. Thus, it is

submitted that claims 1-23 are in condition suitable for allowance. Entry of the Amendment, reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned and request the undersigned attend to these matters.

Finally, if there are any additional fees associated with filing of this Amendment, please charge same to our Deposit Account No. 06-1130.

Respectfully submitted,

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